CHAPTER 118. ADMINISTER A KNOWLEDGE AND SKILL TEST TO AN AGRICULTURAL PILOT

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE: 1579

3. OBJECTIVE. The objective of this task is to determine that the pilots used by a private or commercial agricultural aircraft operator are qualified to act as pilot-in-command (PIC) of an agricultural aircraft. Successful completion of this task results in an indication of satisfactory or unsatisfactory test for each pilot.

5. GENERAL. When required by Federal Aviation Regulations (FAR) § 137.19(e), the applicant or person who supervises agricultural aircraft operations shall be examined to determine that he or she possesses satisfactory knowledge to conduct those operations safely. An applicant citing FAR § 137.41(c) may still be examined to determine that he or she possesses the knowledge required to dispense agricultural materials and chemicals safely if the record of operation raises any doubt concerning the pilot's competence. The inspector may take into consideration, when making the determination of competency of any agricultural aircraft pilot, state-required tests passed by the applicant. For example, based on a pilot's recent state test, an inspector may determine that a knowledge test is not necessary.

A. Location of Test. The skill test may be conducted over an area mutually agreeable to the applicant and the inspector.

B. Location of Inspector During Test. The operations inspector shall observe this test from the ground. Under no circumstances should the inspector ride with the applicant during the skill test.

C. Flight Helmet. The Federal Aviation Administration (FAA) encourages pilots to wear a suitable flight helmet when operating agricultural aircraft in dispensing operations.

D. Suitable Material to be Dispersed During Test. For the purpose of the skill test, the aircraft's dispersal tanks or hoppers shall be loaded with any suitable material, e.g., water, lime, or sand.

(1) Loading shall be to the maximum certificated takeoff weight or the maximum weight established for the special purpose load, whichever is greater. A reduced load should be used in conditions of high density altitude.

(2) Before conducting the skill test, the inspector shall have the operator determine that the dispensing equipment does not contain chemical residue (a herbicide or other agricultural chemical) which may cause damage or create a hazard to the area where the test is conducted.

E. Reasons for Conducting Knowledge and Skill Test. This task may be performed during initial certification of a FAR Part 137 applicant. It may also be conducted at the request of a FAR Part 137 operator or pilot.

F. Not Dispensing Economic Poisons. If the operator does not apply for authorization to dispense economic poisons, the inspector shall not test the applicant on FAR § 137.19(e)(ii) through (iv). The statement of competency issued must reflect this.

7. GUIDANCE FOR THE KNOWLEDGE TEST.

A. Test Development. The examining inspector develops questions from the following topics to determine the applicant's or chief supervisor's knowledge of such operations.

(1) The knowledge test may be oral or written, at the option of the person administering the test. A sample written test and its answer key can be found in figure 118-1. This sample should be considered representative of a written test covering the required areas of knowledge.

(2) District offices are encouraged to develop their own written tests and answer keys, if they desire to use that method of evaluating the applicant's knowledge. Any written test, whether the sample provided in figure 118-1 or one developed by the district office, becomes "known" after it has been administered several times. The test will need to be updated periodically to reflect changes in regulations, new pesticides, etc.

B. State Test Results. Inspectors may accept satisfactory results of any state or local knowledge

test, provided the pilot can produce bona fide test results, such as a certified score sheet.

C. Preflight. In addition to the preflight action required by FAR § 91.5, the following steps should be taken before starting agricultural aircraft operations:

(1) The pilot should conduct a survey of the working area, including the area over which pull-ups and turnarounds will be made. If obstructions to flight include structures, trees, wires, or unfavorable terrain, etcetera, and the pilot has not previously or recently worked the particular area, he or she should conduct a ground survey. Also, a ground survey is highly recommended when a pilot finds it necessary to fly under wires.

(2) The area immediately surrounding the working area should be surveyed to determine that the material dispensed will not create a hazard to persons or property on the surface. The engine and propeller noise emitted as the pilot executes a pull-up and turnaround over these areas has been known to result in damage to some enterprises. As a result of such maneuvering, the agricultural aircraft operator may find himself the object of civil court action in addition to alleged violation of the FAR. The surrounding area should also be investigated for fish ponds, lakes, and streams because certain economic poisons can have a lethal effect upon fish and wildlife.

(3) The agricultural aircraft operator should be tested on the provisions of FAR § 137.51(b)(2) which require the operator to advise the occupants of congested areas before conducting operations there.

D. Contamination Protection. The applicant must demonstrate satisfactory knowledge regarding the methods used to safeguard the pilot against contamination and the safe handling of economic poisons that the pilot dispenses. (For information on the relative toxicity of economic poisons, an LD_{50} index and an explanation for its use are included in chapter 115 of this handbook.

(1) An aerial applicator pilot who is engaged in the actual application of economic poisons should be knowledgeable of the hazards of the pilot's mixing or loading highly toxic poisons. Special emphasis should be placed on this job function when the economic poison is being used in an undiluted form.

(2) The pilot should be able to conduct a ground crew briefing concerning economic poisons and the need to wear protective clothing such as rubber gloves, apron, boots, and a respirator when handling materials that require them. (If a respirator is required, it should be the type which protects the wearer against the particular pesticide being handled.) The pilot should also be able to brief flagmen, when used, concerning the potential hazard of the pesticide being dispensed and should indicate that they be equipped with appropriate protective equipment.

(3) Pilots should also be aware that persons working closely with or handling pesticides should change clothes and bathe at the end of the operation or immediately if pesticide gets on their skin. Clean work clothes should be worn daily.

(4) The pilot must be knowledgeable about procedures to prevent contamination of the water sources if water is obtained from streams or ponds for mixing purposes. The pilot must know state and local laws concerning spillage.

(5) The pilot should be knowledgeable about how often aircraft and spray equipment should be cleaned, e.g., daily or as often as required to remove accumulation of pesticide residue. When aircraft are cleaned, the pilot should be aware of state and local laws concerning drainage into a sewer, ditch, pond, stream, or other body of water, or the location of approved disposal sites.

E. Container Disposal. The applicant should be queried about recommended methods for disposing of used pesticide containers. Environmental Protection Agency (EPA) approved methods for disposal are contained on the pesticide label. State and local laws, however, may require additional precautions, and the inspector should be aware of them. Local extension agents or an EPA office can be of assistance in this area.

F. Economic Poison Labeling. Economic poisons manufactured for interstate use are required by the U.S. EPA regulations to be registered with that department. Those poisons are also required to be labeled, showing the brand name, active ingredients, inert ingredients, directions for use, warning, net contents, and name and address of manufacturer or registrant. The label normally contains other detailed instructions concerning the effects on plants, animals, and persons. Therefore, when required by FAR § 137.19(e), the applicant must show a satisfactory knowledge concerning the general effects and precautions to be observed as described on the label of the economic poisons normally used in the area where the applicant conducts operations.

G. Detecting Contamination. The requirements contained in FAR § 137.19(e)(1)(iv) should not be interpreted as FAA encouragement or endorsement of self-diagnosis. Rather, it is a requirement that the agricultural operator pilot possess sufficient knowledge of the primary symptoms of poisoning to motivate

seeking immediate professional medical attention when an element of doubt exists concerning contamination.

(1) The properties of the specific organophosphate involved, the size of the dose, and the manner of exposure affect the severity and order of appearance of the signs and symptoms of toxicity, but any or all of the following may occur: nausea, vomiting, blurred vision, excessive sweating, excessive secretion of saliva, bronchial constriction, tightness in the chest, slowing of the heart, muscle twitching followed by convulsions, coma, and paralysis. Death is usually caused by respiratory failure. Certain of these symptoms may be deceptive. For instance, the pupil of the eye usually constricts, and the heart rate usually decreases. In the early stages of poisoning, however, the pupil may enlarge and the heart may beat faster. Symptoms may be delayed, appearing, for instance, late at night or on the day following exposure. Repeated, small exposures may constitute as great a danger as the large, single dose.

(2) The chlorinated compounds owe their insecticidal activity and their immediate or acute human toxicity to an action on the nervous system. Symptoms and signs take the form of nausea, dizziness, headache, tremor, and weakness, and in the case of large doses, convulsions, difficult breathing, cyanosis (surface of the body turns blue), and circulatory collapse. The exact mechanism by which these effects are produced is unknown, and there is not a specific treatment.

H. Decontamination Steps. The first step after known or suspected contamination of the skin is usually a thorough washing with soap and water. Alcohol (denatured, 95 percent grain alcohol) is a better decontamination agent, particularly if the area of the contamination is limited. In any event, speed is important. It has been found that 30 minutes after a test application of parathion to the skin, vigorous scrubbing with soap and water will remove 80 percent or more of the material, and alcohol will remove most of the remainder. After 5 hours, however, 40 percent of a test dose cannot be washed off with soap and water, and 10 percent will remain after scrubbing with alcohol. Decontamination is especially important for the pilot who may have become contaminated by chemicals spilled in an accident. Treatment in the field should include such emergency measures as are needed, such as artificial respiration. The patient should be rushed to a physician or a hospital for further treatment.

I. Poison Control Centers. The location of Poison Control Centers in the United States may be found in the most recent issue of the Directory of Poison Control Centers, a publication from the U.S. Department of Health and Human Services (HHS). A local HHS office may also have a copy. The National Pesticide Telecommunication Network has a 24-hour toll-free number (1-800-858-PEST). Qualified personnel there can answer questions about any poisons, insecticides, herbicides, rodenticides, or fungicides and can also provide the LD_{50} index for any farm chemical. They also provide information on treatment, by a doctor, after contamination or suspected contamination, on clean-up after a spill, about the location of the nearest poison control centers, and on disposal of containers. Inspectors may wish to provide the name and telephone number of this hotline to agricultural operators who do not already have it.

J. Airplane Operating Limitations. When required by FAR § 137.19(e), the applicant must be tested to determine that he or she possesses adequate knowledge of operating limitations for the aircraft to be used in accordance with the applicable requirements contained in FAR 91.31. Special emphasis should be placed on weight and balance information. If the applicant conducts operations using helicopters, the applicant should understand that the Height/Velocity diagrams do not provide information for weights above the maximum certificated gross weight. The applicant must also be tested concerning aircraft performance capability, provided performance data have been established for the aircraft to be used. Questions about performance shall include such items as:

(1) Stall speeds at maximum certificated gross weight, straight ahead, power off, flaps up (V_{s1})

(2) Best rate (V_y) and best angle (V_x) of climb speed

(3) Maneuvering speeds

(4) Density altitude and its effect on performance

(5) Takeoff distance required to clear a 50-foot obstacle, maximum certificated gross weight, with zero wind

K. Safe Application Procedures. The applicant should be queried about safe flight and safe application procedures during agricultural operations.

(1) The pilot should be familiar with the hazards associated with dispensing sulphur or other solid agricultural materials containing a high percentage (30 percent or more) of sulphur.

(2) When conducting operations over sloping terrain, caution should be exercised relative to the direction of swath runs. Flying up the slope may result in stalling the aircraft before reaching the end of the

swath run or contribute to an inadvertent stall during the pull-up or turnaround.

(3) Pull-ups and turnarounds are normally made on the downwind side of the centerline of the swath run. However, unfavorable terrain, wires, guy wires, poles, trees, or other obstructions may require their being made on the upwind side. If a no-wind condition exists, it is usually the best procedure to make the turn into an open area (if available) in the event of power loss or engine failure.

(4) The aerial applicator pilot should not look back at the swath during a swath run. To do so may result in allowing the aircraft to fly into the ground or other obstruction.

(5) The aerial applicator pilot may have a tendency to apply forward pressure on the elevator control or cyclic control (on a helicopter) when flying under wires. Such a tendency should be avoided because once any part of the structure of the aircraft (wheels, skids) becomes entangled in crop foliage, it may be difficult, if not impossible, to prevent the aircraft from being "pulled" to the ground. The vertical fin may also contact the wires as the aircraft passes underneath them.

(6) When two or more aircraft are used in applying chemicals to a field, the pilots conducting the operations should be encouraged to make arrangements between them concerning who performs the clean-up swaths or trim passes, when applicable. Midair collisions have occurred between aircraft conducting team operations when such coordination has not been accomplished.

L. Night Operations. If the operator conducts night operations, the pilot must have knowledge of night operations. Refer to chapter 117, Conduct a Base Inspection of a FAR Part 137 Operator, for test areas.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of Federal Aviation Regulations (FAR) Part 137 and Federal Aviation Administration (FAA) policies and qualification as an aviation safety inspector (ASI) (operations).

B. Coordination. This task may require coordination with the airworthiness unit. This task may be performed by the operator's chief supervisor.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- FAR Parts 1, 61, and 91
- Advisory Circular (AC) 137-1, Agricultural Aircraft Operations

B. Forms.

- FAA Form 1360-33, Record of Visit, Conference, or Telephone Call
- FAA Form 8000-36, Program Tracking and Reporting Subsystem Data Sheet
- FAA Form 8710-1, Application for Airman Certificate or Rating

C. Job Aids.

- Sample letters and figures

5. PROCEDURES.

A. Need for Knowledge and Skill Test. Determine if the pilot needs the knowledge and skill test or has been previously qualified under FAR Part 137.

(1) If the test is not required or can be conducted by the operator's chief supervisor, record the outcome on FAA Form 1360-33. Place this in the district office file for the operator. Do not open a Program Tracking and Reporting Subsystem (PTRS) file for this task.

(2) If a test is required, provide applicant with a copy of FAA Form 8710-1 and schedule a date and time for the test.

B. PTRS File. Open PTRS file for this task.

C. Review Application. After arriving for the test, examine FAA Form 8710-1 for completeness and accuracy.

(1) Ensure that the applicant has checked "Other" under Section I, Application Information, and entered "Agricultural Aircraft Pilot Test" in the blank provided.

(2) Ensure that the applicant has filled out Section I, A through U. If "U" has been checked "Yes," "V" must also be filled out.

(3) Ensure that the applicant has filled out Section IIA, 1, 2a, and 2b.

(4) The applicant does not need to fill out Section III, Record of Pilot Time.

(5) Ensure that the applicant has checked either "Yes" or "No" in Section IV.

(6) Ensure that the applicant has signed and dated the application in Section V.

(7) No instructor's recommendation is required on the reverse side of FAA Form 8710-1.

D. Pilot Certificates. Inspect pilot certificates and ensure the pilot has:

(1) An appropriate and current medical certificate

(2) An appropriate pilot certificate with category and class ratings as required (FAR § 137.19)

E. Knowledge Test. Conduct oral and/or written examination on the subject matter specified in FAR 137.19(e)(1).

(1) If the oral or written test portion is failed, notify the pilot and operator. Confirm in writing (figure 118-2) and reschedule the knowledge portion of the test. On the reverse side of FAA Form 8710-1, check "Disapproved" under the "Inspector's Report" section. Place FAA Form 8710-1 in the district office file on the operator. Do not forward it to Oklahoma City. The skill portion of the test may proceed at the inspector's option.

(2) If the oral or written test portion is satisfactory, proceed with the skill portion of the test. Discuss the sequence of events and the safety considerations for the skill portion of the test.

F. Aircraft Documents. Inspect the aircraft's documents. Ensure that the registration and airworthiness certificates are current and appropriate.

(1) N-number matches that on the registration certificate

(2) Data plate information, serial number, airworthiness certificate, and registration certificate match each other and aircraft registry records

(3) Agricultural operator certificate facsimile on board, if knowledge and skill test is not conducted as part of initial operator certification

G. Aircraft Conformity. Inspect aircraft for compliance with FAR § 137.19(d), 137.31(b), and 137.33(a) and (b) (airworthiness).

(1) Logbooks reflect that all required inspections have been accomplished

(2) Airworthiness directives are complied with

H. Skill Test. Conduct the skill portion of the test (FAR § 137.19(e)(2)). The applicant is to be briefed and evaluated on piloting skill and operational judgement in the following:

(1) Ground crew coordination and loading procedures

(2) Engine start, warmup, and taxi procedures

(3) Short field and soft field takeoffs (airplanes and gyroplanes only), directional control, lift-off, and climb

(a) One takeoff at minimum speed

(b) One takeoff at V_x

(4) Approaches to the working area

(a) Satisfactory aerial survey of area for obstructions

(b) Proper method of beginning operations; normally, starting operation crosswind on downwind side of field

(5) Flareout

(a) Should not touch ground or crop during flareout

(b) Should be consistently at same height and proper position over field on several flareouts

(6) Swath runs

(a) Consistent altitude (plus or minus 5 feet)

(b) Four or more demonstrated

(c) Looking back at swath during swath run is disqualifying

(d) to fly through clouds of spray or the dust of previous swath; successive swath runs spaced so as to place the wing tip into or overlapping the swirl of the previous swatch is not disqualifying

(e) Begins and terminates spray application within the specified area and does not allow overspray or "drift down" to reach adjacent fields

(7) Pull-ups and turnarounds

(a) Consistent height in turnarounds, obstructions permitting

(b) Smooth and coordinated

(c) Turn in proper direction relative to wind, obstructions, and field layout

(d) Obstruction clearance before starting turn

(e) Proper throttle and hopper or tank control manipulation at beginning and end of swath run

(8) Clean-up swath or trim passes

(a) Recognizes the need for clean-up swath or trim pass

(b) Adequately covers uncovered areas

(9) Jettisoning of remainder of load after swath runs in the event of inflight emergency

(10) Rapid deceleration or quick stops (helicopter only)

(11) Approach, touchdown, and direction control on landing

(a) One landing

(b) Adequate precautions used around turning propellers or rotor blades

(12) Taxi, engine shutdown, and securing of aircraft

I. Skill Test Unsatisfactory. If the applicant fails the skill portion of the test, notify the pilot and the operator. Confirm in writing (figure 118-2) and schedule a date and time for re-examination. On the reverse side of FAA Form 8710-1, check "Disapproved" under the "Inspector's Report" section. Place FAA Form 8710-1 in the district office file on the operator. Do not forward it to Oklahoma City.

J. Skill Test Satisfactory. When the applicant satisfactorily accomplishes the skill portion of the test, issue a letter of competency (figure 118-3) or make a logbook entry (figure 118-4). If a logbook entry is used, write a memorandum indicating satisfactory completion of the test for the office file. On the reverse side of FAA Form 8710-1, check the "Approved" under the "Inspector's Report" section. Place FAA Form 8710-1 in the district office file on the operator. Do not forward it to Oklahoma City.

K. PTRS. Close PTRS work entry for this task.

L. District Office File. Place results of test in the district office file for that operator.

7. TASK OUTCOMES. Completion of this task results in either:

A. A logbook entry or letter of competency.

B. A letter to the operator and/or pilot indicating failure of both or either portions of the test.

9. FUTURE ACTIVITIES. Any future monitoring of a pilot after successful completion of a knowledge and skill test would be as part of scheduled surveillance of the FAR Part 137 operator or as a result of a complaint, violation investigation, accident investigation, or in cooperation with other government agencies.

FIGURE 118-1
SAMPLE WRITTEN KNOWLEDGE TEST

1. Should a pilot-in-command of an agricultural aircraft assist in mixing and loading the aircraft when dispensing a highly toxic poison such as Parathion? [*Insert name of another chemical which is in common use in the applicant's area of operation.*]

2. When dispensing a highly toxic poison, what instruction would you give your flagman, if one is being used?

3. What are some of the symptoms of chronic toxic effect?

4. How would you dispose of containers that held a toxic poison?

Paper bag _____

Glass container _____

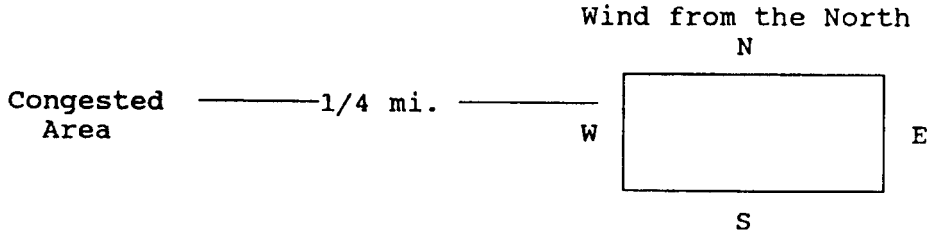
Drums or cans _____

5. Where is the nearest poison control center?

6. If you have mild symptoms of organophosphate poisoning, can you administer the recommended antidote yourself and continue work until an appointment with a doctor can be arranged?

7. What emergency action would you take if a known contamination exists?

8. Indicate your swath runs and procedure turns over the following field, when dispensing 2-4-D.



9. Would you apply a chemical such as Parathion to this field? If so, how and when?

10. What wind direction would be required for applying 2-4-D on the crop in the following field sketch?

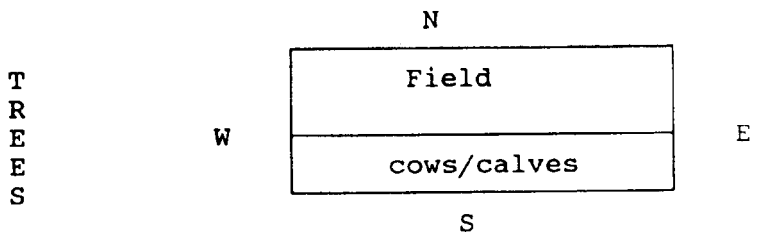


Figure 118-1 —Continued
SAMPLE WRITTEN KNOWLEDGE TEST

11. How long should records required by FAR § 137.71 be kept?

a. 6 months
b. 12 months
c. until the end of the season
d. indefinitely

12. While airborne, before starting your swath run, what steps do you take?

13. In applying insecticides for insect control adjacent to a lake, stream, or fish-stocked earth tank, what precautions must be taken?

14. Does your agricultural aircraft operator's certificate allow you to fly under 500 feet over the top or closer than 500 feet horizontal to a farm while going to or from your base of operation and the field you are to treat?

15. What are the steps to be taken before you can dispense chemicals over a city, town, settlement, or other congested area?

16. Does your aircraft have to be inspected before you can engage in applying insecticide for insect control over a congested area?

17. In your procedure turn, you misjudge your turn and roll out 300 feet to the right side of your flagman. How would you correct this error?

18. Your agricultural aircraft is required by FAR Part 137 to be equipped with a (circle one):

a. quantity tank gauge
b. shoulder harness
c. stall warning horn
d. boom pressure gauge

19. In order to dispense chemicals over a congested area, you are required by FAR Part 137 to have your aircraft equipped with which of the following:

a. stall warning horn
b. tank quantity gauge
c. emergency dump valve or chemical jettison device
d. boom pressure gauge

20. 2-4-D will not harm most broad leaf plants. True or False?

21 What certificate or certificates have to be carried on the aircraft engaged in agricultural aircraft operations?

a. registration
b. facsimile of the agricultural aircraft operator's certificate
c. both of the above

22. You are flying a restricted category agricultural aircraft with a belly unit and two seats. Can you use this aircraft for other purposes than agricultural operations?

23. Are you required to wear a crash helmet during operations?

24. At what time or at what position would you consider the most critical while you are dispensing chemicals?

25. As your bank increases, what happens to your stall speed?

Figure 118-1 — Continued
SAMPLE WRITTEN KNOWLEDGE TEST

ANSWER KEY

1. There is no absolutely correct answer to this question. Ideally, the pilot should not be the person who loads the chemical since the danger of contamination is possible. The person should respond in that manner.

2. Walk upwind at all times to avoid the drifting chemicals.

3. The specific symptoms will vary somewhat with the type of pesticide used. The pilot should also respond that the symptoms can be mistaken for other diseases before chronic toxic effect is suspected and that the effects are cumulative. Generally, the symptoms are nausea, vomiting, blurred vision, excessive sweating, among others.

4. The answer to this question would depend on the chemical in the containers. Generally, paper containers are burned; glass containers are broken then buried; drums, etc., may be returnable or can be washed out with a detergent and water solution.

5. The answer would have to reflect the local area.

6. No.

7. The answer would depend upon the chemical, the location of the contamination, and any state or local requirements. Generally, the pilot should wash with soap and water. For small areas, use alcohol.

8. Spray runs and procedure turns should be depicted so that drift and/or aircraft do not overrun the congested area.

9. No. Another chemical less toxic should be used.

10. From the south to the north.

11. b.

12. Survey the area.

13. A definite wind blowing away from streams, lakes, etc.

14. No.

15. Obtain prior written approval from the governing body of the jurisdiction, give public notice of the operation, and obtain an FAA approved plan.

16. Only the required annual or 100-hour inspections.

17. Pull up and reenter the swath run.

18. b.

19. c.

20. False.

21. b.

22. No.

23. No, it is not required by FAR, but it may be a requirement in some states.

24. As you start your procedure turn downwind.

25. Increases.

FIGURE 118-2
LETTER CONFIRMING FAILURE OF KNOWLEDGE AND SKILL TEST

FAA Letterhead

[*date*]

[*applicant's address*]
Dear [*applicant's name*]:

This is to inform you that on [*date*], you failed to satisfactorily demonstrate the required [*skill*] [*knowledge*] required by Federal Aviation Regulations Part 137 to act as a pilot in aerial agricultural operations.

The areas of deficiency were:

[*Cite the areas*.]

Additional instruction or study in these areas is recommended.

Should you have any questions concerning this test, please contact this office.

Sincerely,

[*signature of inspector conducting the test*]
[*Send copy to supervisor of agricultural operations, if applicable.*]

FIGURE 118-3
STATEMENT OF COMPETENCY LETTER

FAA Letterhead

[*date*]

[*operator's name and address*]

Dear [*operator's name*]

This is to certify that [*pilot's name*] holder of [*grade of certificate*] pilot certificate [*certificate number*] has on this date satisfactorily completed the knowledge and skill test for an agricultural aircraft pilot as specified under Federal Aviation Regulations § 137.19(e) and is qualified to serve as pilot-in-command in agricultural aircraft operations.

[*He or she*] is [*is not*] authorized to dispense economic poisons.

Sincerely,

[*signature and title of FAA inspector or supervisor of agricultural operations, if applicable*]

FIGURE 118-4
SAMPLE LOGBOOK ENDORSEMENT

This is to certify that [*pilot's name*] holder of [*grade of certificate*] pilot certificate [*certificate number*] has on this date satisfactorily completed the knowledge and skill test for an agricultural aircraft pilot as specified under FAR § 137.19(e) and is qualified to serve as pilot-in-command in agricultural aircraft operations.

[*He or she*] is [*is not*] authorized to dispense economic poisons.

[*date*]

[*signature and title of FAA inspector or supervisor of agricultural operations*]

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